

ZERO-ORDER  
MICROPHONE  
(OMNI DIRECTIONAL)

FIGURE 1A  
(PRIOR ART)

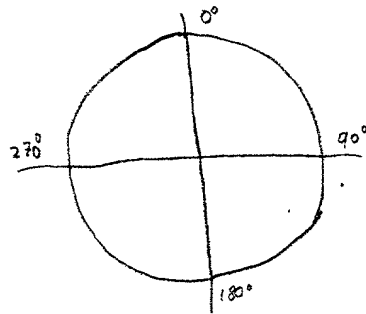
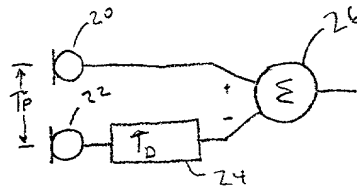


FIGURE 1B  
(PRIOR ART)



FIRST-ORDER  
MICROPHONE  
 $DR = T_D / T_P$

FIGURE 2A  
(PRIOR ART)

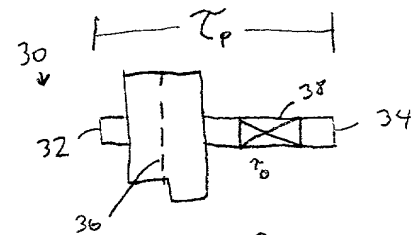


FIGURE 2B  
(PRIOR ART)

$DR = 0$   
BIPOLAR

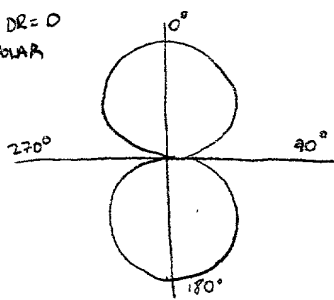


FIGURE 2C  
(PRIOR ART)

$DR = 0.33$   
HYPERCARDIOID

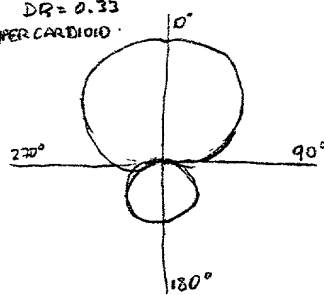


FIGURE 2D  
(PRIOR ART)

$DR = 0.58$   
SUPERCARDIOID

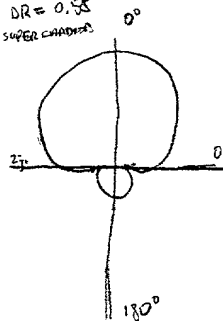


FIGURE 2E  
(PRIOR ART)

$DR = 1$   
CARDIOID

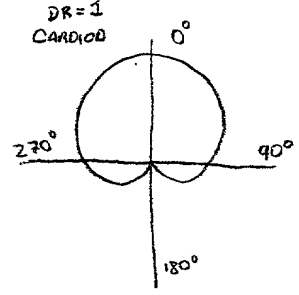


FIGURE 2F  
(PRIOR ART)

005020" 88T0T960

005020" 33T0T360

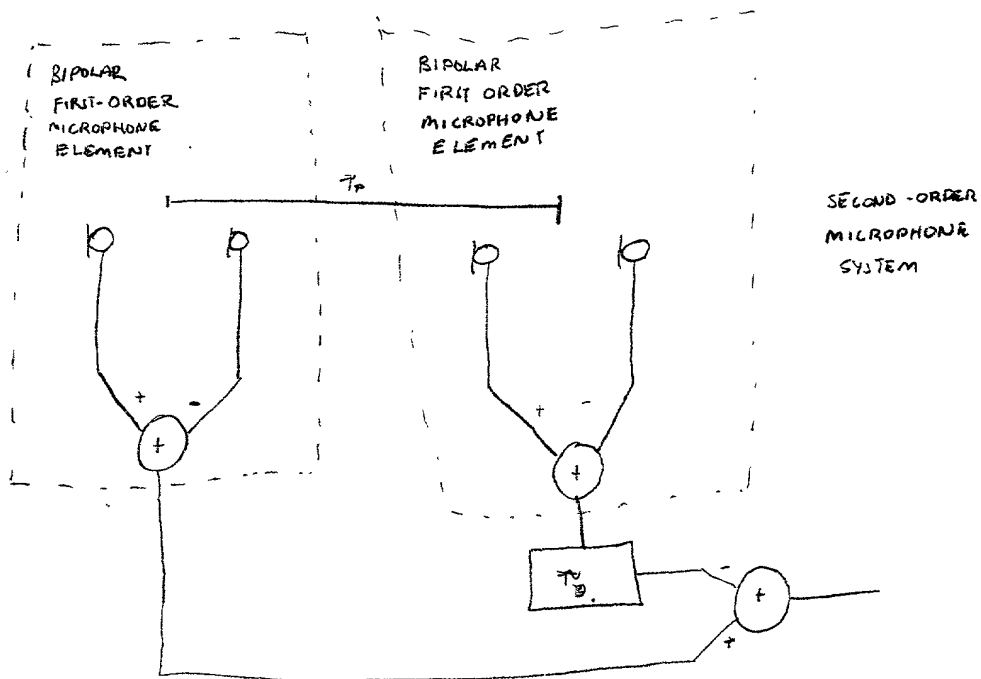


FIGURE 3A  
(PRIOR ART)

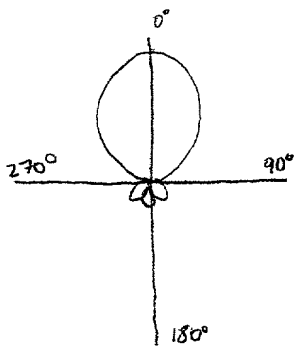


FIGURE 3B  
(PRIOR ART)

005020" 33T0T360

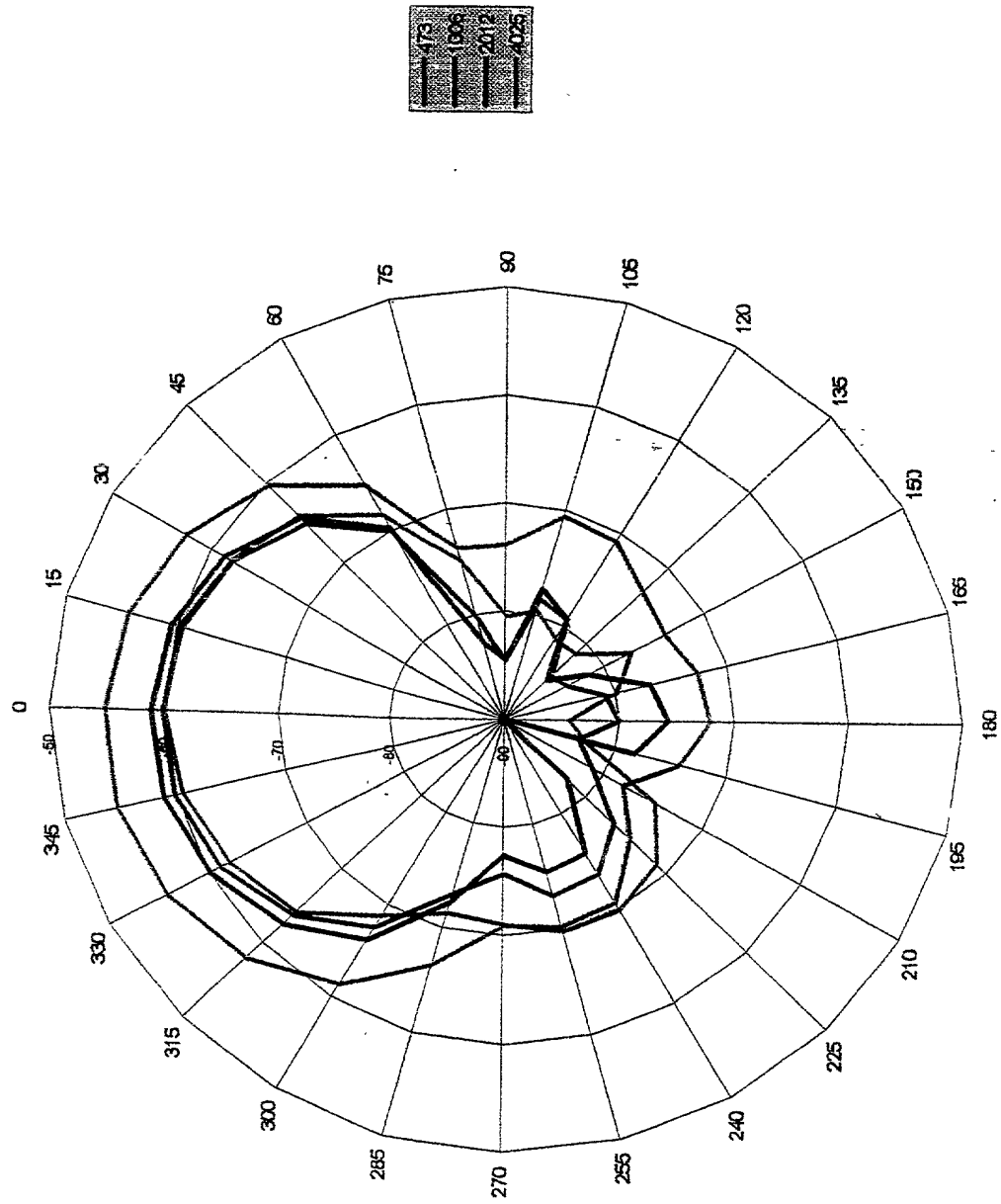


FIGURE 4A

005020" 88T0T350

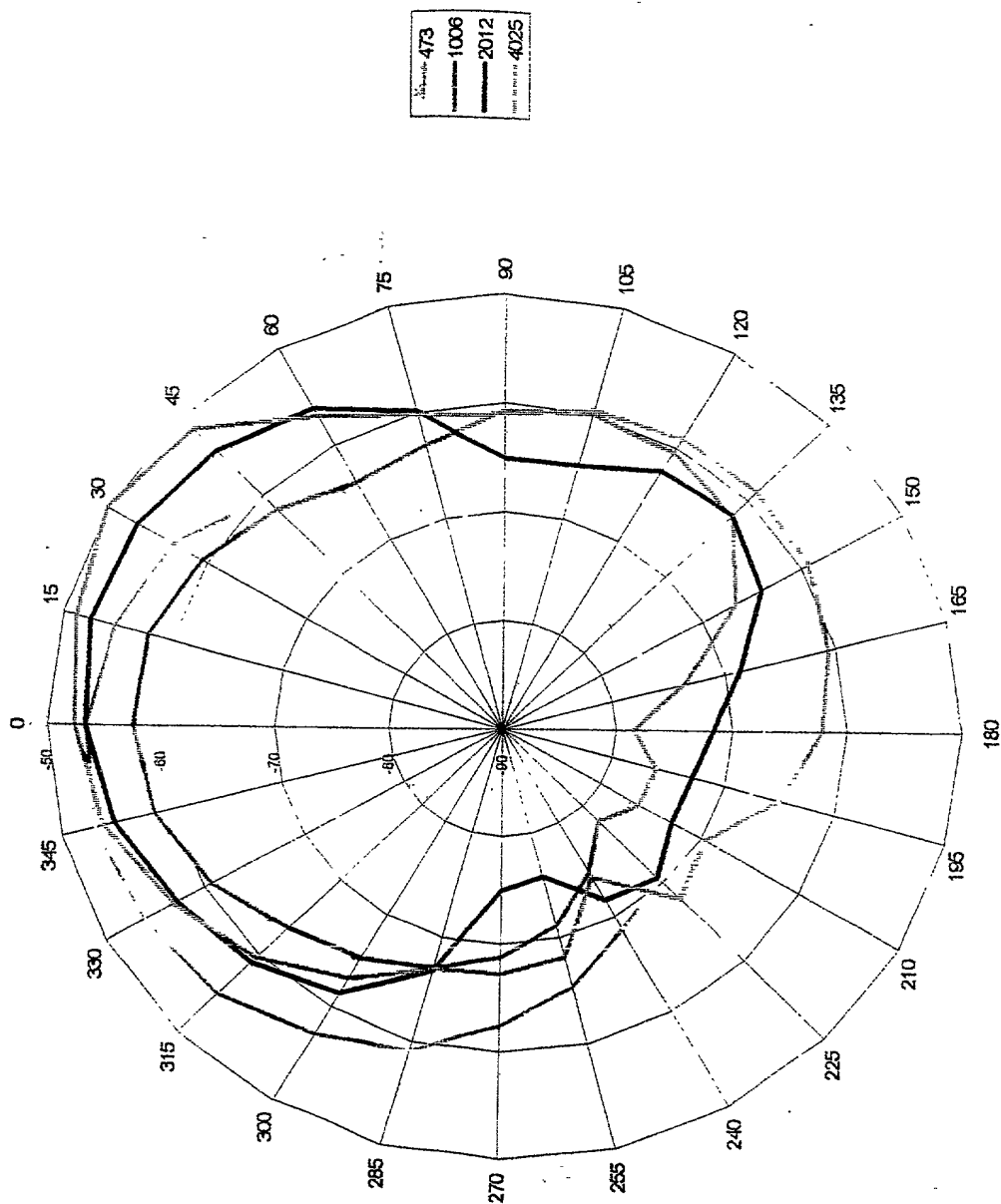


FIGURE 4B

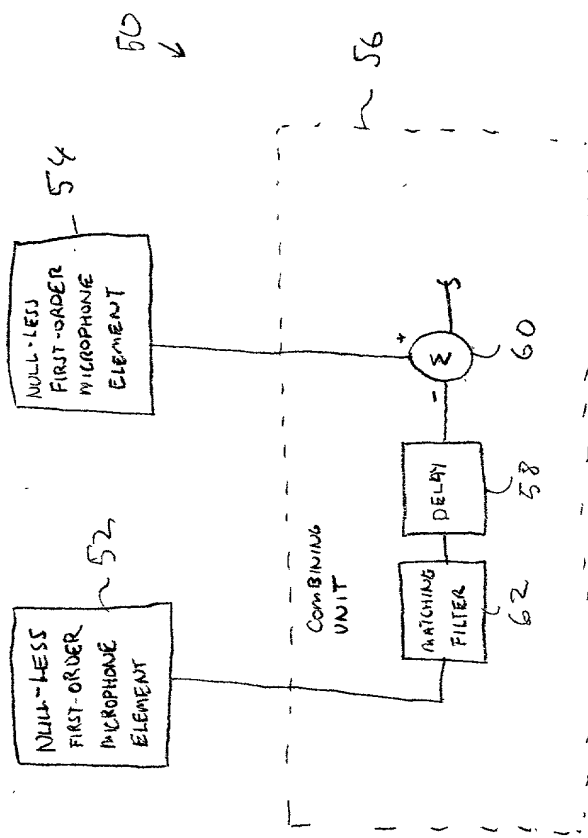


FIGURE 5

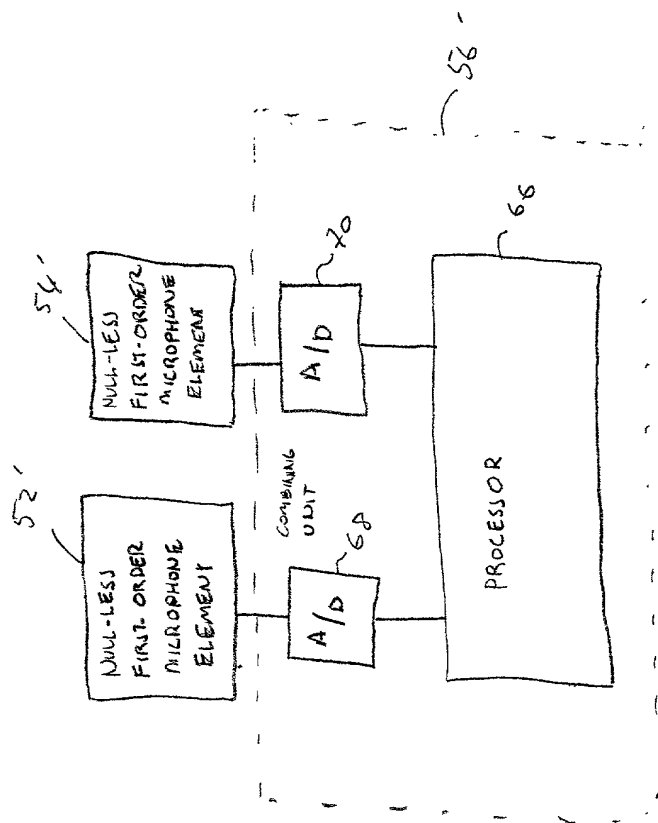


FIGURE 6

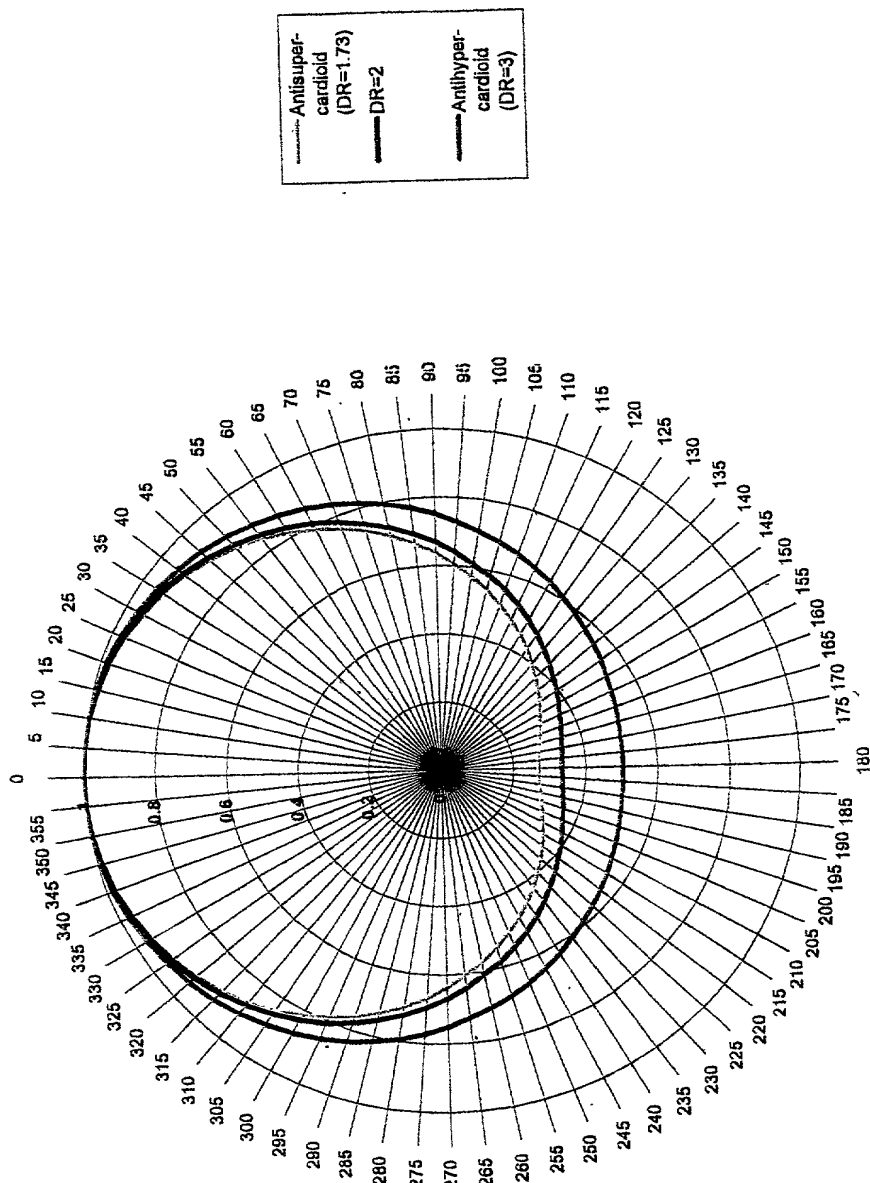


FIGURE 7

015020" 83T0T960

0000

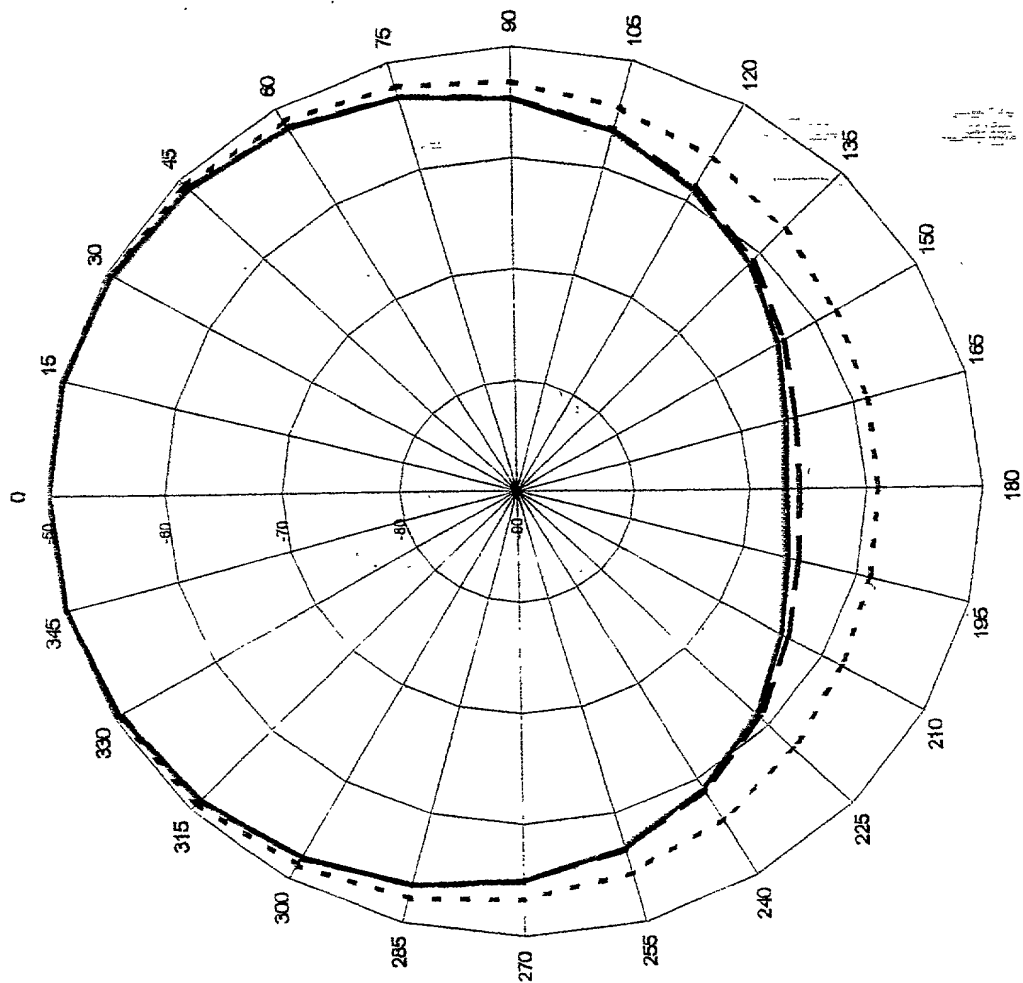


FIGURE 8A



005040" 88T07360

POLAR PLOT - 1 METER

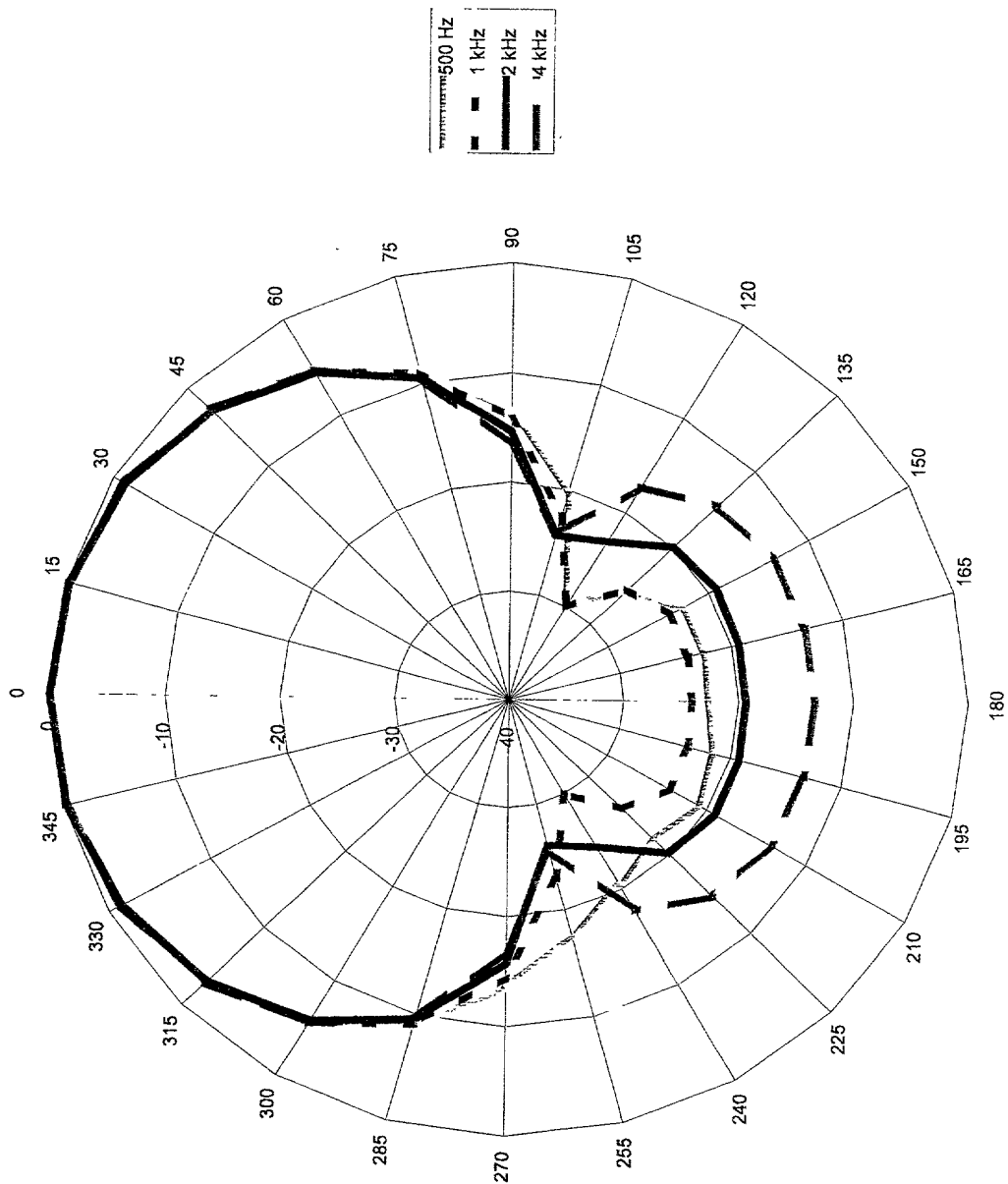


FIGURE 3B

005020" 88T0T360

POLAR PLOT - 1 METER

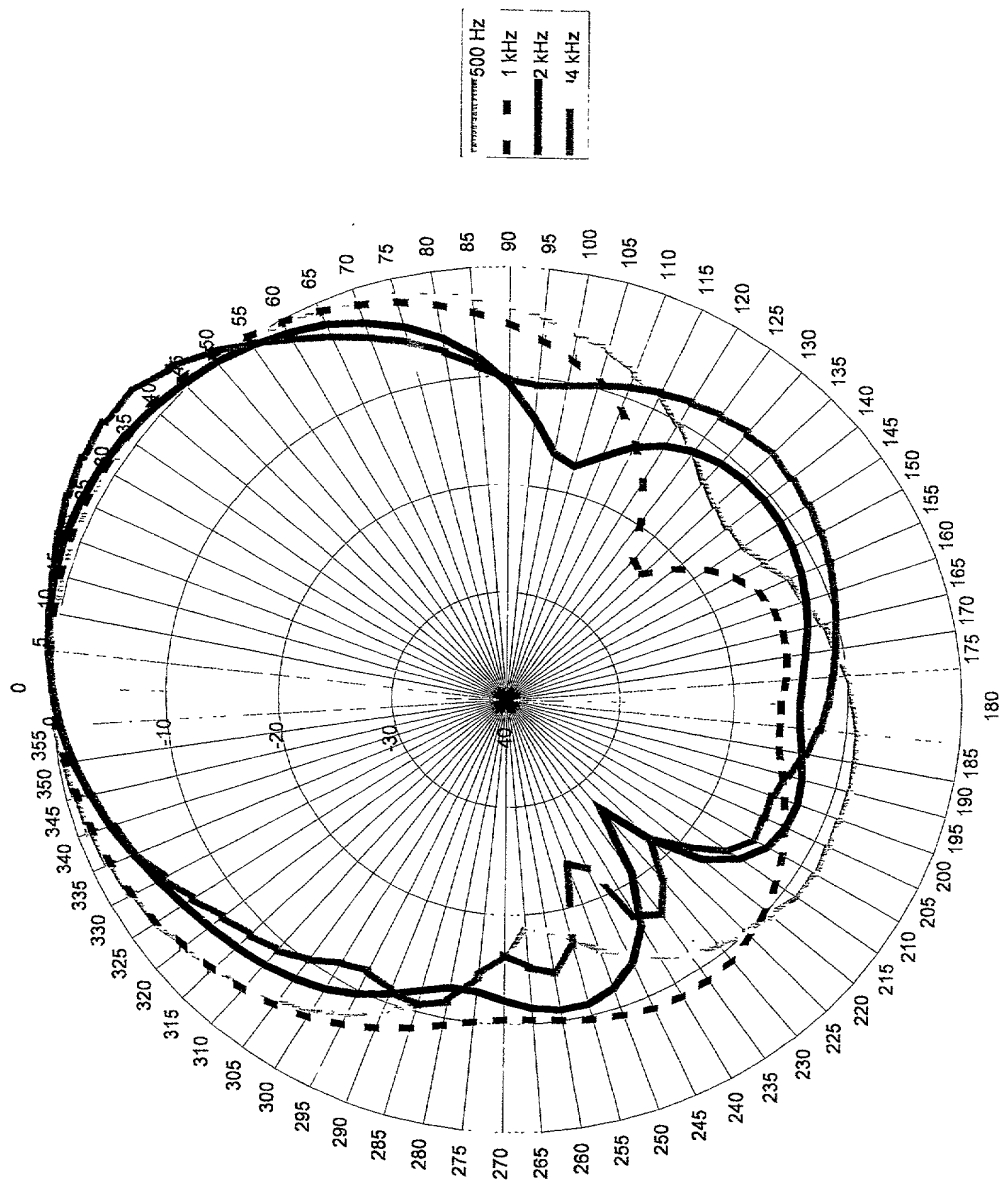


FIGURE 8C

005020" 83T0T360

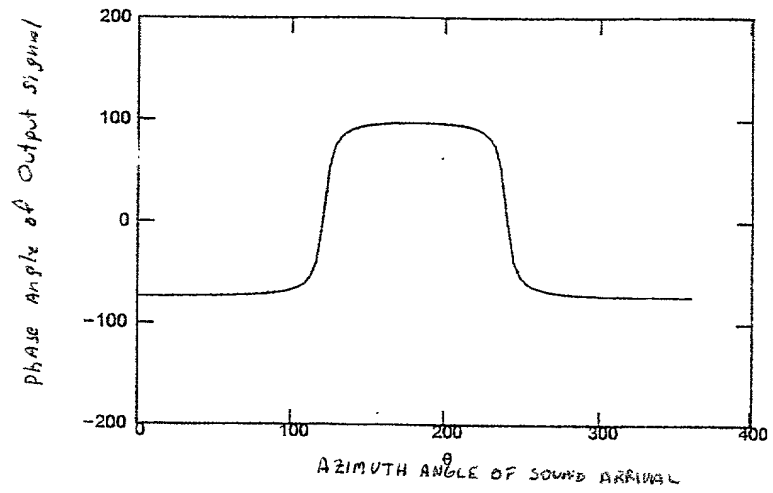


FIGURE 9A

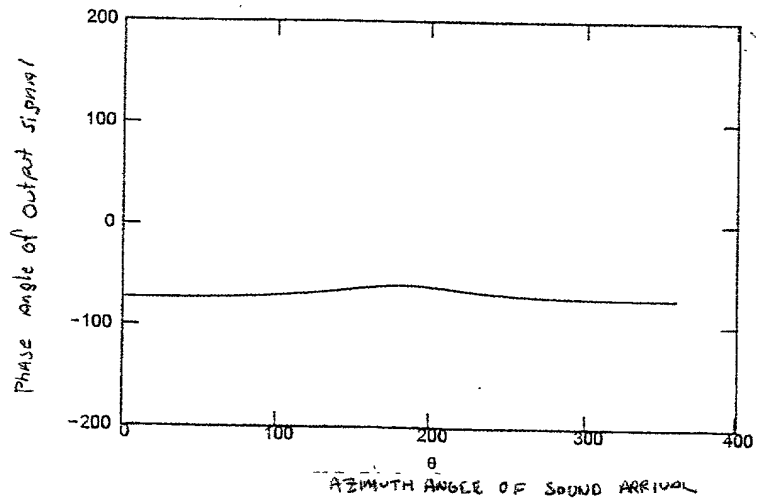


FIGURE 9B

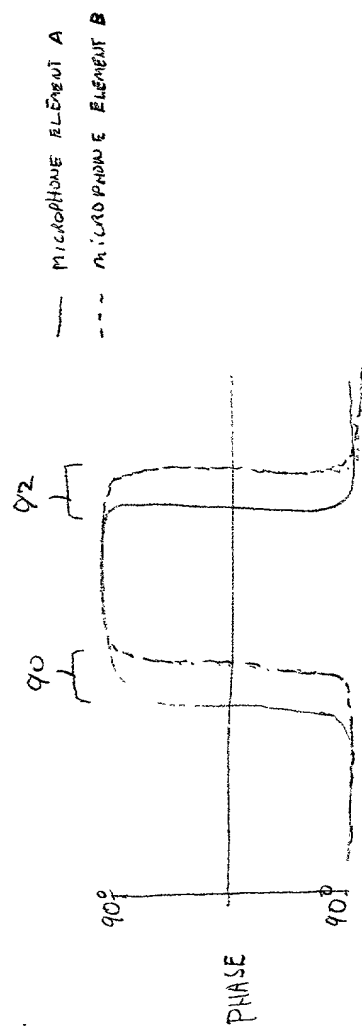


FIGURE 10

005020" 88T0T360

ELEMENT TYPE	Conventional Elements				New Elements			
	Bipolar (Figure 8) $DR=0$	Hyper-Cardioid $DR=0.33$	Super-Cardioid $DR=0.58$	Cardioid $DR=1$	Anti-SupCard. $DR=1.73$	$DR=2$	$DR=2.5$	Anti-HypCard. $DR=3$
Theoretical DI	9.0	8.7	9.3	9.0	7.9	7.7	7.4	7.2
1.5 dB Element Mismatch	5.6	5.4	2.0	3.2	5.8	6.1	6.4	6.5
5° Misalignment	4.6	3.8	2.7	4.6	6.3	6.5	6.6	6.6
2 $\mu$ s Delay Error	3.1	2.6	1.8	3.0	5.0	5.4	5.8	6.0
Misalignment and Delay Error Combined	3.8	3.5	2.9	3.6	5.0	5.2	5.6	5.8

FIGURE 11

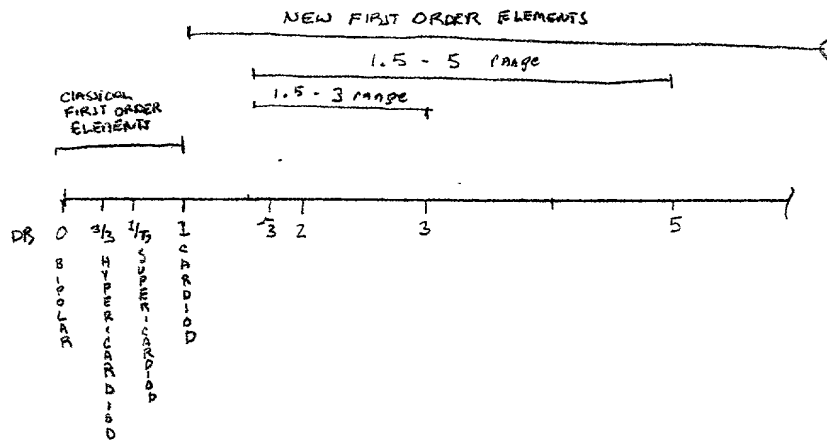
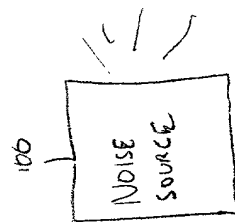
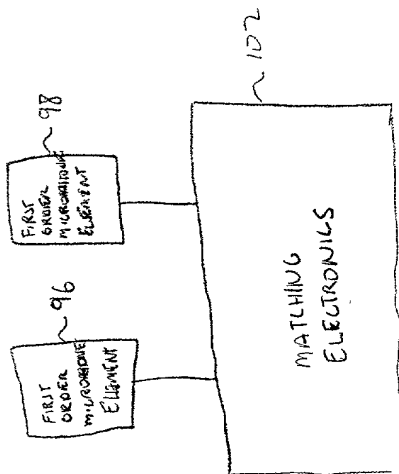


FIGURE 12



BACK



FRONT

FIGURE 13